

CLAIMS

1. A vehicle wheel (4) comprising a hub (8) suitable for being mounted rotatably on an axle (6) of the wheel (4), the axle (6) extending in an axial direction, a rim (32) suitable for being associated with a tyre (44), the rim (32) having a lateral surface (46) suitable for delimiting, together with the tyre (44), an inflation chamber (48) for the tyre (44), at least one spoke (52) which fixes the rim (32) and the hub (8) together for rotation relative to the axle (6) of the wheel (4), the spoke (52) comprising a hub-attachment portion (56) and a rim-attachment portion (60), in which at least a section of the rim-attachment portion (60) constitutes a solid body (64) in which there are formed a first duct (68) which extends substantially along an axis of the spoke and is in flow communication with the inflation chamber (48) through the lateral surface (46) of the rim (32), and a second duct (72) which is arranged substantially perpendicularly relative to the first duct (68) so that, in the region of a first end (76) of the second duct (72) which faces towards the first duct (68), the second duct (72) intersects the first duct (68) so as to create a flow communication between the first duct and the second duct (68, 72) and, in the region of a second end (80) remote from the first end (76), the second duct (72)

emerges laterally from the at least one spoke (52) with an opening (84), the opening (84) being suitable for connection to inflation means.

2. A vehicle wheel (4) according to Claim 1, comprising a
5 central plane (R) arranged perpendicularly relative to the axle (6), the central plane (R) dividing the wheel (4) into two half-portions arranged symmetrically on opposite sides of the central plane (R).

3. A vehicle wheel (4) according to Claim 1 or Claim 2,
10 in which the second duct (72) emerges, in the region of the second end (80), in a raised portion (88) which projects from the at least one spoke (52).

4. A vehicle wheel (4) according to Claim 3, in which the raised portion (88) comprises a flattened surface (92) at
15 a free end of the raised portion (88).

5. A vehicle wheel (4) according to Claim 4, in which the flattened surface (92) constitutes an abutment for an inflation valve (94).

6. A vehicle wheel (4) according to Claim 4 or Claim 5,
20 in which the flattened surface (92) constitutes an abutment for sealing means (128), the sealing means (128) being interposed between the second duct and an inflation valve (94).

7. A vehicle wheel (4) according to any one of the
25 preceding claims, in which the first and second ducts

(68, 72) extend for a distance shorter than the rim-attachment portion (60) of the at least one spoke (52).

8. A vehicle wheel (4) according to any one of the preceding claims, in which the second duct (72) constitutes a seat suitable for housing an inflation valve (94).

9. A vehicle wheel (4) according to Claim 8, in which the second duct (72) comprises, in an internal side wall (96) thereof, a threaded portion (100) suitable for forming a threaded connection with a corresponding threaded portion (116) of a valve body (108) of an inflation valve (94).

10. A vehicle wheel (4) according to any one of the preceding claims, in which the first duct (68) extends substantially radially.

11. A vehicle wheel (4) according to any one of Claims 1 to 10 in which the first duct (68) extends substantially symmetrically with respect to the central plane (R).

12. A vehicle wheel (4) according to any one of Claims 1 to 11, in which the second duct (72) extends substantially perpendicularly relative to the central plane (R) of the wheel (4).

13. A vehicle wheel (4) according to any one of Claims 1 to 12, in which the second duct is positioned outside a projection, onto the central plane (R), of at least one brake disc mounted firmly and coaxially on the hub in the

region of an axial end (20) of the hub (8).

14. A vehicle wheel (4) according to any one of the preceding claims, in which the wheel (4) comprises a bush suitable for being housed in the second duct (72) and
5 suitable for housing in its interior a valve body (108) of an inflation valve (94).

15. A vehicle wheel (4) according to Claim 14 in which the bush is made of brass.

16. A vehicle wheel (4) according to Claim 14 in which
10 the bush is made of an aluminium alloy.

17. A vehicle wheel (4) according to any one of the preceding claims in which the wheel (4) is made of an aluminium alloy.

18. A vehicle wheel (4) according to any one of Claims 1
15 to 16 in which the wheel (4) is made of a magnesium alloy.

19. A vehicle wheel (4) according to any one of the preceding claims, comprising an inflation valve (94) suitable for being fitted in the second duct (72) so as
20 to constitute a means for the inflation of a tyre (44) that can be associated with the wheel (4).

20. A vehicle wheel (4) according to any one of the preceding claims, in which the first duct (68) is blind in the direction in which the at least one spoke (52)
25 extends.

21. A method for the manufacture of a wheel (4) according to any one of the preceding claims, comprising the steps of:

producing, by means of a casting process, a rim (32)
5 having a spoke (52) comprising, in the region of a solid body (64), a first duct (68) extending radially; and a raised portion (88) extending axially,
drilling the spoke axially (52) in the region of the raised portion (88) so as to produce a second duct (72)
10 which intersects the first duct (68), and
flattening the raised portion (88) in a plane perpendicular to the axle (6).

22. A method for the manufacture of a wheel (4) according to Claim 21, in which the first duct (68) is blind in the
15 direction in which the spoke (52) extends.

23. A method for the manufacture of a wheel (4) according to Claim 21 or Claim 22, comprising the step of forming a thread in the internal side wall (96) of the second duct
(72).